

Differences in Order of North Polar Distance.

N.P.D.	Greenwich—B.J.		No.	Greenwich—"303."		No.	Greenwich—A.E.		No.	Greenwich—Newc.		No.
	R.A.	N.P.D.	of Stars.	R.A.	N.P.D.	of Stars.	R.A.	N.P.D.	of Stars.	R.A.	N.P.D.	of Stars.
° 0 to 10	+°078	—°13	11	s	"	...	+°018	—°13	4	+°289	+°02	8
10 „ 20	—°054	—°09	43	...	...	...	—°043	—°033	5	—°128	—°04	5
20 „ 30	—°054	—°21	47	...	...	...	—°072	—°004	5	—°075	+°11	10
30 „ 40	—°032	—°13	34	...	...	...	—°036	—°052	7	—°083	+°14	14
40 „ 50	—°045	—°17	52	...	...	...	—°052	—°022	12	—°062	+°11	15
50 „ 55	—°034	+°24	27	...	...	...	—°065	—°004	9	—°051	+°09	10
55 „ 60	—°040	+°01	24	...	...	...	—°053	—°010	12	—°042	+°10	13
60 „ 65	—°037	—°17	31	...	...	...	—°062	—°033	10	—°047	°00	19
65 „ 70	—°023	+°11	28	...	...	...	—°045	+°006	15	—°050	+°16	25
70 „ 75	—°023	+°10	30	...	...	...	—°029	+°005	9	—°058	+°11	19
75 „ 80	—°023	+°16	28	...	...	...	—°045	+°024	19	—°055	+°29	23
80 „ 85	—°028	+°22	29	...	...	...	—°042	+°007	20	—°060	+°36	30
85 „ 90	—°010	—°02	20	—°013	+°47	23	—°034	+°014	9	—°057	+°31	19
90 „ 95	—°011	+°02	27	—°020	+°48	36	—°030	—°002	12	—°057	+°30	24
95 „ 100	—°023	+°12	23	—°018	+°70	44	—°037	+°015	18	—°060	+°34	23
100 „ 105	—°021	+°01	16	—°027	+°78	31	—°047	+°002	8	—°060	+°49	14
105 „ 110	—°034	—°01	24	—°023	+°79	44	—°048	+°018	9	—°057	+°56	22
110 „ 115	—°016	—°29	18	—°024	+°86	28	—°030	+°043	6	—°056	+°50	19
115 „ 120	+°004	—°26	13	—°012	+°94	3	—°017	+°043	11	—°040	+°46	19

1898 April 6.

Observations of the companions of Sirius and Procyon, made at the Royal Observatory, Greenwich.

(Communicated by the Astronomer Royal.)

The cloudy weather prevented any observation of *Sirius* during the early part of the year, and it was not till Sunday, March 20, that there was a night sufficiently good for the companion to be seen. On this night the position was measured by Mr. Lewis, as follows :—

March 20	1898·214	Position Angle. 179°·2	Distance. 4''·68
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The companion was also seen by Mr. Bryant and Mr. Melotte, but they did not make any measures. The difficulty of measurement was not due to the faintness of the companion so much as to the diffused image of *Sirius* at the low altitude.

The companion of *Procyon* has been observed on three nights by Mr. Lewis.

		Position Angle.	Distance.
March 20	1898.214	327°7'	3.93"
March 31	.244	326°0'	4.02"
April 4	.255	324°4'	4.84"

On two nights the companion was seen by Mr. Melotte.

The observer noted that the appearance of the companion of *Procyon* was not so like a star as that of *Sirius*, and that while the wire of the micrometer totally eclipsed the companion of *Sirius*, the companion of *Procyon* was seen on both sides of the wire.

Royal Observatory, Greenwich :
1898 April 4.

Observations of Nebulæ. By Herbert A. Howe.

(Communicated by the Secretaries.)

In the latter part of 1897 September a series of micrometrical measures of nebulæ was begun by the writer at the Chamberlin Observatory, University Park, Colorado, U.S.A.

The working list contains all of Swift's nebulæ, and also a large number of others between the equator and 30° of south declination, the positions of which are not known to have been micrometrically measured. As the publication of this series of observations may be considerably delayed, it has been thought best to publish from time to time such preliminary results as may be of interest.

Each nebula is connected with some star in the field of view by micrometrical measures of $\Delta\alpha$ and $\Delta\delta$. The star, if not found in any good catalogue, is connected with some catalogue star by chronographic measures of $\Delta\alpha$, and micrometric of $\Delta\delta$. The last-mentioned observations are made at times when faint nebulæ are invisible because of the brightness of the Moon. The observations given below were made during the last four months of 1897 with the 20-inch Clark equatorial refractor armed with a magnifying power of 185 diameters. The mounting of the instrument was constructed by Sægmüller, and has proved to be very convenient for this work. When the positions of the nebulæ, as given in Dreyer's New General Catalogue, or in the supplementary catalogue in Vol. LI. of the *Memoirs of the R.A.S.*, are more than ten seconds in error in right ascension, or two minutes in declination, the correct positions are given. These places are, however, for 1900.0, which is the epoch of the working list.

By the liberality of Miss Catherine W. Bruce, of New York